

# **California Interagency Working Group on Indoor Air Quality**

## **Meeting Minutes**

**September 18, 2002**

**Cal EPA Headquarters  
1001 I Street, Sacramento**

### **GENERAL ANNOUNCEMENTS**

### **SPECIAL PRESENTATION**

### **AGENCY REPORTS ON CURRENT IAQ ACTIVITIES**

California Air Resources Board / IAQ & Personal Exposure Assessment Program  
California Department of Health Service / Environmental Health Investigations Branch  
California Department of Health Service / Indoor Air Quality Section  
California Department of Health Service / Occupational Health Branch  
California Department of Health Service / Tobacco Control Section  
California Department of Industrial Relations (Cal/OSHA)  
Lawrence Berkeley National Laboratory / Indoor Environments Program  
Office of Environmental Health Hazard Assessment / Indoor Air Risk Assessment Group  
Sacramento County Commission on Human Rights & Fair Housing  
U.S. EPA Region IX / Indoor Environment Team

### **FUTURE MEETINGS**



## GENERAL ANNOUNCEMENTS

By all reports, the **Indoor Air 2002** conference in Monterey was a tremendous success in every regard – over 700 technical papers were presented, plus a dozen highly acclaimed plenary talks and distinguished lectures; more than 1100 people attended from over 40 countries; and the social programs, such as the banquet at the Monterey Aquarium, were great fun and memorable occasions. Conference proceedings are still available; contact the secretariat at [http://www.indoorair2002.org/contact\\_ia2002.htm](http://www.indoorair2002.org/contact_ia2002.htm).

An update on [AB 284](#) (Jackson) activities (i.e., review panel on the effects of fungal contamination on indoor environments) is included in these notes. Update on the [SB 732](#) (Ortiz) implementation is available on-line.

The California Energy Commission held a workshop regarding the Public Interest Energy Research (PIER) Buildings' upcoming targeted solicitation in the area of energy-related IEQ. The public workshop was held on Thursday, September 26, 2002. See [http://www.energy.ca.gov/pier/notices/2002-08-21\\_workshop\\_notice.html](http://www.energy.ca.gov/pier/notices/2002-08-21_workshop_notice.html).

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## SPECIAL PRESENTATION

**Update on CEC's Public Interest Energy Research (PIER) Buildings Program**  
by  
**Martha Brook, California Energy Commission**

Handouts from her presentation can be viewed at:  
<http://www.cal-iaq.org/CIWG/brook2002.pdf>

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## AGENCY REPORTS ON CURRENT IAQ ACTIVITIES

**California Air Resources Board / Indoor Air Quality & Personal Exposure Assessment Program**

<http://www.arb.ca.gov/research/indoor/indoor.htm>

-- Peggy Jenkins ([mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov))

**Indoor Air 2002.** ARB co-sponsored this major international conference that was held July 2002 in Monterey, California. ARB staff also co-chaired two sessions on children's environmental health and prepared highlights for those sessions. ARB staff manned a booth where they received many visitors and distributed many IAQ guidelines and fact sheets. Contact: Tom Phillips ([tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov)).



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**Indoor Air Chemistry: Cleaning Agents, Ozone, and Toxic Air Contaminants.** Work began on this study in July 2002. Initial tasks involve identifying candidate products in several categories to be tested in emission chambers at Lawrence Berkeley National Laboratory with and without the introduction of ozone. Cleaning products will be selected based on their reactivity, potential for emissions of Toxic Air Contaminants, and presence in the marketplace. The list of products to be tested will be finalized in Fall 2002 with further testing on the composition of the selected products to continue into Spring 2003. Contact: Jeff Yanosky ([jyanosky@arb.ca.gov](mailto:jyanosky@arb.ca.gov)).

**ECOS/ASTHO Asthma Meeting.** At a meeting of state representatives from across the U.S., Peggy Jenkins presented information on preventive measures that can be taken at schools to reduce exposure to indoor and outdoor asthma triggers, and California programs and projects that address asthma. Progress by the Collaborative for High Performance Schools (CHPS) in developing healthy schools was highlighted, along with projects and programs by DHS and ARB that are focused on asthma assessment, prevention, and treatment. The meeting was the third of several being held to develop a nationwide state strategy for reducing asthma, which has continued to increase in the population. The first meetings focused on data collection/information needs and indoor triggers. This meeting focused on school-related asthma concerns, and the fourth meeting, scheduled for October, will examine outdoor air triggers. An important concern in California schools is the lack of a statewide policy regarding whether asthmatic children should be allowed to carry their medicine with them vs. having to obtain it when needed from a school health staff person. Another issue is the difficulties school districts have encountered in obtaining sufficient funds to provide for proper maintenance and repair of school buildings and facilities. Contact: Peggy Jenkins ([mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov)).

**Monitor Development Project.** ARB is collaborating with the California Energy Commission and the State of New York to promote the development and commercialization of low cost, easy-to-use monitors for indoor and outdoor air quality. There has been an increasing demand by local communities and individuals who want to monitor their indoor and outdoor air quality. The solicitation was released in August. Over 60 pre-proposals have been received and are currently under review. It is anticipated that about 3-5 awards will be made from the \$1.5 million offering this year. For more information, see <http://www.arb.ca.gov/research/icat/solicit.htm>. Contact: Peggy Jenkins ([mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov)).

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**California Department of Health Service / Environmental Health Investigations Branch** -- Sandra McNeel ([SMcNeel@dhs.ca.gov](mailto:SMcNeel@dhs.ca.gov)) <http://www.dhs.ca.gov/ps/deodc/ehib/>

**Asthma:** In June administrative staff of the Regional Asthma Management and Prevention Initiative (RAMP) and the Community Action to Fight Asthma Program (CAFA) joined EHIB on the 17<sup>th</sup> floor of the Harris State Office Building in Oakland. EHIB staff look forward to collaborating with these organizations in facilitating future asthma research and community outreach efforts. (Contact: George Saunders [gsaunder@dhs.ca.gov](mailto:gsaunder@dhs.ca.gov))



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Legislation: Passage of the 2002-2003 state budget created the Public Health Protection from Indoor Mold Hazards Fund within the state Finance Department. This fund will accept voluntary contributions from individuals or others to support the Department of Health Services indoor mold-related activities in providing education and developing standards and guidelines, including, but not limited to duties included in SB 732 (Toxic Mold Protection Act of 2001). EHIB and Environmental Health Laboratory Branch staff will be developing plans for use of funds that may be generated through this mechanism. (Contact: Sandy McNeel [smcneel@dhs.ca.gov](mailto:smcneel@dhs.ca.gov))

AB 284, passed by the legislature last year, requires the California Research Bureau (part of the California State Library) in consultation with the Department of Health Services, to publish a report on fungal contamination of indoor environments. The expert panel mandated by this statute has been formed and is collaborating on a draft report. The final report is due to the legislature on January 1, 2003. (Pamela Davis, California Research Bureau, ).

Presentations: Staff participated in the UC Berkeley Center for Occupational and Environmental Health summer institute workshop, "Biological Hazards in the 21<sup>st</sup> Century", on August 2, 2002, presenting information on human health effects associated with indoor endotoxin exposure.

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### **California Department of Health Service / Indoor Air Quality Section**

-- Jed Waldman ([JWaldman@dhs.ca.gov](mailto:JWaldman@dhs.ca.gov))

<http://www.cal-iaq.org>

**Environmental Tobacco Smoke (ETS) Study.** The final phase, a field study in an office building, is being scheduled in Las Vegas later this fall. In addition, we are planning to analyze the 2002 and 2003 CATS and 2002 CTS data. The analysis of the 1999 CTS and 2001 CTS data has been completed. Contact: Leon Alevantis, [Lalevant@dhs.ca.gov](mailto:Lalevant@dhs.ca.gov).



**Emissions of Building Materials With High-Recycled Contents.**

We have completed Phase I of the CIWMB-funded study to measure emissions of building materials with high recycled -content compared to "standard" products common to classroom construction. A total of 19 building materials were tested and a final draft of the Phase I report is due to the CIWMB on June 17th. PHI has started contacting manufacturers for samples to be tested in Phase II of the study. This phase focuses on material emissions of products common to state office building construction as well as recycled content products promoted as sustainable alternatives. In May, the CIWMB approved additional funds for this study to measure emissions from tire-derived products, which will be tested during Phase II of the project. Microscopic testing of wallboard (gypsum) is underway. Contact: Leon Alevantis, [lalevant@dhs.ca.gov](mailto:lalevant@dhs.ca.gov).

**Presentations.** In addition to presentations at Indoor Air 2002 and ISEA/ISEE 2002 (listed in the [June 2002 notes](#)):

- "Training Material for Aerobiology and Bioaerosol Research" (Round table) — International Aerobiology Congress, Montreal, Canada (Aug 9), by Janet Macher.
- "Bioaerosols and Public Health" (Tutorial) — International Aerosol Conference, Taipei, Taiwan, (Sep 8), by Janet Macher.
- "Microbiology Review for Industrial Hygienists" — UC Center for Occupational and Environmental Health, Oakland, California (Aug 2), by Janet Macher.

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**California Department of Health Service / Occupational Health Branch**

-- Jim Cone ([Jcone@ohb.org](mailto:Jcone@ohb.org)), and Liz Katz ([Ekatz@dhs.ca.gov](mailto:Ekatz@dhs.ca.gov)) <http://www.ohb.gov>

**Departure of Branch Chief.** The Occupational Health Branch (OHB) bids a reluctant farewell to Dr. Jim Cone on September 20. Chief of OHB for 5 years, Dr. Cone conducted indoor air research and investigations in aircraft, schools, hospitals, offices and other workplaces in his capacity as occupational health physician. Dr. Cone leaves to start directing the Office of Environmental and Occupational Epidemiology at the New York City Department of Health. Dr. Barbara Materna, Chief of the Occupational Lead Poisoning Prevention Program within OHB, has been appointed Acting Chief of the Branch.

**Newsletter Tracking Workplace Injuries & Illnesses.** OHB has a new publication called *Occupational Health Watch: Tracking California Workplace Injuries & Illnesses*. The first issue (Summer 2002) reports on many workplace health and safety issues. The 12-page newsletter can be downloaded at <http://www.dhs.ca.gov/ohb/pdf/ohw1.pdf>.

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**California Department of Health Service / Tobacco Control Section**

-- Joanne Wellman-Benson ([JWellman@dhs.ca.gov](mailto:JWellman@dhs.ca.gov))

**National Conference on Tobacco or Health.** The 2002 National Conference on Tobacco or



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Health will be held in San Francisco from November 19-21, 2002 at the Hilton San Francisco. The seven program areas the conference is organized around are: “Comprehensive Tobacco Control Programs or Combined Strategies”, “Evaluation and Surveillance”, “Cessation, Nicotine, and the Science of Addiction”, “Increasing Diversity/Eliminating Disparities”, “Public Policy and Advocacy Strategies”, “Media and Communications Strategies”, and “Tobacco Use Prevention Among Youth.” For more information, go to [www.tobaccocontrolconference.org](http://www.tobaccocontrolconference.org)

**Secondhand Smoke Workgroup.** The Secondhand Smoke workgroup will be developing a Secondhand Smoke “campaign” that will gather existing information on secondhand smoke and compile it for use for TCS-funded programs. The information collected will cover indoor air quality as well as outdoor tobacco smoke. The campaign will include issues such as health effects, policies, bar surveys, smoke-free cars/homes, smoke-free apartments, ventilation, child custody, outdoor entertainment venues, economic data, college/university settings, the military, legal opinions, liability, etc. The Workgroup’s first meeting to determine the course of the campaign will be held on September 26, 2002.

**Outdoor Smoking Law.** Governor Davis signed into law AB 1867, which prohibits smoking within 25 feet of playgrounds and tot lots. This is an amended version of last year’s bill, AB 188, which prohibited smoking only within the boundaries of the playground or tot lot. This bill also increased the penalty for each violation from \$100 to \$250.

**Campus Smoking Policy.** The California State University (CSU) trustees are considering a resolution giving CSU presidents the authority to establish smoking policies on their own campuses. Currently, policies could only be set by the Board of Trustees, as established by state law, which curtailed the adoption of policies developed by students and TCS-funded programs at several of the 23 CSU campuses. State law prevents smoking within 5-feet of building doorways. The advocacy group COUGH (Campuses Organized and United for Good Health) is spearheading the effort, with the goals of having at least a 20-ft smoke-free doorway policy, adoption of a phase-in policy to be smoke-free by August 2004, and to prohibit tobacco sales on all CSU campuses.

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### **California Department of Industrial Relations (Cal/OSHA)**

– Bob Nakamura (bnakamura@hq.dir.ca.gov)

<http://www.dir.ca.gov/dosh/>

**Revision of the Sanitation standard, GISO 3362.** HESIS proposed language to the Division to change the sanitation standard to specifically identify mold as an unsanitary condition that must be corrected by the employer. An advisory meeting was held on Tuesday, November 13<sup>th</sup> at 10 AM in the Oakland State Building. A proposal was drafted at the meeting that was adopted by the Occupational Safety and Health Standards Board in Sacramento on June 20, 2002. The subsection, now in effect, as of September 4, 2002 is as follows:

Title 8, Calif. Code of Regulations; General Industry Safety Orders: Article 9 Sanitation §3362. General Requirements.



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(g) When exterior water intrusion, leakage from interior water sources, or other uncontrolled accumulation of water occurs, the intrusion, leakage or accumulation shall be corrected because of the potential for these conditions to cause the growth of mold.

For information, contact Bob Nakamura at 415-703-5160.

**IAQ Advisory Committee.** The Division is planning to review IAQ issues. When the first Advisory Committee completed its work, the intent was to await the Federal OSHA standard on IAQ. However, Federal OSHA recently removed IAQ from its long-term agenda. Consequently, the Division plans to review the recurrent issues relating to enforcing regulations that apply to indoor air quality situations. The first meeting is tentatively planned November 20, 2002, in Oakland. For more information contact Bob Nakamura at 415-703-5160 or Deborah Gold at 415-703-5115.

**Airborne Contaminants: 8CCR 5155.** The Division is continuing to review Threshold Limit Value changes proposed by the ACGIH. The first meeting of the advisory committee was on May 4, 2001. Another meeting will be scheduled soon. The Division coordinator is Bruce Wallace who can be reached at 415-703-5165.

**Laboratory Fume Hoods: 8CCR 5154.1.** The Division has convened five advisory committee meetings to evaluate two different petitions requesting the Standards Board to reduce ventilation rate requirements and establish a performance standard in place of the existing regulation that relies on face velocity measurements. The last meeting was on August 8<sup>th</sup> in San Francisco. Another draft proposal was presented and discussed by the attendees but no final proposal was adopted. A revised proposal has been circulated to the members of the committee. The Division coordinator is Bruce Wallace who can be reached at 415-703-5165.

**Heat Stress Standard.** The Division has held three advisory committee meetings to review the need and issues involved in proposing a standard for heat stress. The last meeting was on February 15, 2002 in Oakland. A draft proposal was reviewed at the meeting, and revisions will be forthcoming based on the outcome of the meeting. For more information, contact Bob Barish at 415-703-5100.

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### **California Research Bureau**

-- Pamela Davis ([pdavis@library.ca.gov](mailto:pdavis@library.ca.gov))

**California Assembly Bill 284.** On October 5, 2001 California Governor Gray Davis signed Assembly Bill 284 (AB 284), authored by Assembly-woman Hannah-Beth Jackson (D-Ventura), into law. AB284 requires the California Research Bureau (CRB), in consultation with the California Department of Health Services, to perform a study of, and publish review panel findings on, the effects of fungal contamination on indoor environments. The panel report is scheduled to be



published in early 2003.

The bill requires that the CRB select and organize meetings of a review panel to assist in the preparation of appropriate content for the study. The review shall, as mandated by law, to the extent resources and expertise permit, include findings on all of the following:

- (a) The health effects of exposure to fungi, based on a review of the literature addressing immunology, infectious disease, and medical evaluation.
- (b) The practices for assessing fungal contamination, including the use of visual inspection, surface sampling, air monitoring, and the proper analysis of environmental samples.
- (c) To the extent feasible, the appropriateness of commercially available methods for identifying fungal contamination of building components including, but not limited to, walls, ventilation systems, and support beams.
- (d) The options for preventing and remediating fungal contamination in indoor environments. The findings are intended as a practical guide regarding options for building managers, homeowners, and members of the general public who may have concerns about fungal contamination in living and working environments.
- (e) Recommendations on hazard communication for distinct sub-populations, including workers employed in high-risk occupations.
- (f) The development of a recommended reading list related to molds, their health effects, their impacts on indoor air quality, and related topics for local government officials, including environmental health officers.
- (g) Any additional topical areas deemed appropriate by the review panel.

To view the full text of AB 284 on-line visit: [http://leginfo.public.ca.gov/pub/bill/asm/ab\\_0251-0300/ab\\_284\\_bill\\_20011007\\_chaptered.html](http://leginfo.public.ca.gov/pub/bill/asm/ab_0251-0300/ab_284_bill_20011007_chaptered.html)

**AB 284 Panel Selection.** In order to provide an opportunity for interested stakeholders to have input early on in the process the AB 284 project coordinator, CRB Analyst Pamela J. Davis, invited interested parties to submit recommendations for both the study bibliography, and the review panel participants/characteristics. Response to these requests was quite strong resulting in the collection of over 400 potential bibliographic references and more than 70 CV submissions from potential review panel participants.

From the CV's submitted and in accordance with the directives of the law, the following 14 panel members were chosen:

**Rajiv Bhatia, MD, MPH,** Director, Occupational & Environmental Health, San Francisco Department of Public Health;

**Harriet Burge, Ph.D.,** Harvard School of Public Health, Associate Professor of Environmental Health;

**Eugene Cole, Dr.P.H., M.P.H.,** Brigham Young University, Department of Health Sciences, Professor of Environmental Health;



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**Frederick Fung, M.D., M.S.**, SHARP Rees Stealy Medical Group, Toxicology and Occupational Health University of California at San Diego and Irvine;  
**James Holland, R.E.A., C.R., W.L.A., C.M.R.**, CEO, Restoration Consultants;  
**Robert Levin, M.D.**, Ventura County Health Officer;  
**Edward Light, C.I.H., M.S.**, President, Building Dynamics, LLC;  
**Joseph Lstiburek, Ph.D., P. Eng., M.Eng.**, Principal, Building Science Corporation;  
**Kenneth F. Martinez, C.I.H., M.S.**, National Institute for Occupational Safety and Health;  
**Philip R. Morey, Ph.D., M.S., C.I.H.**, Air Quality Science, Inc.;  
**Stephen S. Ruggiero, P.E.**, Simon, Gumpertz & Heger, Incorporated;  
**Brian Shelton, M.P.H., B.S.**, Director of Laboratories & Consulting Microbiologist, VP/COO Pathcon Control Associates;  
**Linda Stetzenbach, Ph.D.**, University of Nevada, Director Microbiology Division;  
**Chin S. Yang, Ph.D., M.S.**, Microbiologist, P&K Microbiology Services, Inc.

**Open Forum for the purpose of stakeholder input.** In January 2003 the review panel will convene in Sacramento California for the purpose of hearing stakeholder comment on the draft document. To receive a copy of the commentary draft prior to the forum, information regarding forum participation, and periodic e-mail updates on the progress of the report, contact Pamela J. Davis at the California Research Bureau, P.O. Box 942837, Sacramento, CA 95818, or via e-mail at [pdavis@library.ca.gov](mailto:pdavis@library.ca.gov).

Pamela J. Davis, R.N., P.H.N. is a Policy Analyst with the Environmental and Natural Resources Division of the California State Library, California Research Bureau (CRB). The text of a paper written by Ms. Davis and published by the CRB in March of 2001, titled "Mold, Toxic Mold, and Indoor Air Quality" can be found on-line at: <http://www.library.ca.gov/crb/01/notes/v8n1.pdf>.

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### **Lawrence Berkeley National Laboratory / Indoor Environments Program**

-- Mike Apte ([MGAPte@lbl.gov](mailto:MGAPte@lbl.gov))

<http://eetd.lbl.gov/iep/iep.html>

The IED is involved in a wide array of ongoing research projects relating to IAQ. Program information is available at the web site.

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### **Office of Environmental Health Hazard Assessment / Indoor Air Risk Assessment Group**

-- Richard Lam ([RLam@oehha.ca.gov](mailto:RLam@oehha.ca.gov))

<http://www.oehha.org/>

**Hot Spots Document.** OEHHA is reviewing public comments received on the draft document, *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments*. It will include comments from workshops held in June in Oakland and Diamond Bar. This draft Guidance Manual has been developed by OEHHA, in conjunction with the Air Resources Board, for use in implementing the Air Toxics Hot Spots Program (Health and Safety Code Section 44360). The draft Guidance Manual combines the critical information from the four Technical



Support Documents onto a guidance manual for the preparation of health risk assessments. The document can be downloaded at: [http://www.oehha.ca.gov/air/hot\\_spots/HRSguide.html](http://www.oehha.ca.gov/air/hot_spots/HRSguide.html)

**Chronic Reference Exposure Levels (RELs) for Airborne Toxicants.** In accordance with the Air Toxics Hot Spots Program (Health and Safety Code Section 44360), OEHHA has adopted RELs for phosphine and triethylamine. In its July 26, 2002 meeting, the Scientific Review Board (SRP) endorsed RELs for phosphine and triethylamine, bringing the total number of chemicals for which chronic RELs are provided to 78. Additional RELs are currently undergoing review by the public and SRP. The expanded list and supporting summaries is available on OEHHA's web site. The summaries are available at: [http://www.oehha.ca.gov/air/chronic\\_rels/90302\\_2chrels.html](http://www.oehha.ca.gov/air/chronic_rels/90302_2chrels.html)

**East Bay Children's Respiratory Health Study.** The update on the study is given in two papers at the 2002 ISEE/ISEA Conference in Vancouver, Canada. The abstracts of the two papers are included as [Attachment A](#). Contact person: Janice Kim [Jkim@oehha.ca.gov](mailto:Jkim@oehha.ca.gov).

**California School Sites.** OEHHA has released a report *Identification of Potential Chemical Contaminants of Concern at California School Sites*. This report provides a status regarding OEHHA's implementation of Health and Safety Code (HSC) Section 901(g). The report also serves a means for OEHHA to obtain interested parties' comments on the technical approach taken and on the potential chemical contaminants of concern to be evaluated for purpose of developing health guidance values. Specifically, HSC Section 901(g) requires that:

On or before January 1, 2002, OEHHA, in consultation with the appropriate entities within the California Environmental Protection Agency (Cal/EPA), shall identify those chemical contaminants commonly found at school sites and determined by OEHHA to be of greatest concern based on criteria that identify child-specific exposure and child-specific physiological sensitivities.

On or before December 31, 2002, and annually thereafter, OEHHA shall publish and make available to the public and other state and local environmental and public health agencies and school districts, numerical health guidance values for five of those chemical contaminants identified until the contaminants identified have been exhausted. A copy of the report can be downloaded at:

[http://www.oehha.ca.gov/public\\_info/public/kids/schoolsrisk.html](http://www.oehha.ca.gov/public_info/public/kids/schoolsrisk.html)

**Proposition 65.**

- Notice is given by OEHHA to amend Title 22, California Code of Regulations, Section 12705 (specific regulatory levels posing no significant risk) and Section 12805 (specific regulatory levels: reproductive toxicants). A public hearing will be held on October 21, 2002 in Sacramento, and any written statements or arguments must be received by October 21, 2002. This notice and other information is available at: [http://www.oehha.ca.gov/prop65/CRNR\\_notices/Not12705\\_82302.html](http://www.oehha.ca.gov/prop65/CRNR_notices/Not12705_82302.html)
- Notice of Amendments to Title 22, California Code of Regulations, Sections 12601 and 12201. The Office of Administrative Law approved the amendments on August 27, 2002, and will be effective on September 26, 2002. The amended regulatory text and the supporting rulemaking documents are available at: <http://www.oehha.ca.gov/prop65/law/12601noticeF.html>
- Notice of intent to list strong inorganic acid mists containing sulfuric acid as a chemical known to



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the state to cause cancer.

[http://www.oehha.ca.gov/prop65/CRNR\\_notices/admin\\_listing/intent\\_to\\_list/extendnoil19b4.html](http://www.oehha.ca.gov/prop65/CRNR_notices/admin_listing/intent_to_list/extendnoil19b4.html)

- Proposition 65 Fact Sheet for Tenants. This fact sheet will provide information to tenants whose apartment managers and owners have posted or distributed Proposition 65 warnings: <http://www.oehha.ca.gov/prop65/background/p65ten.html>

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**U.S. EPA Region IX / Indoor Environment Team** <http://www.epa.gov/iaq/>

-- Barbara Spark ([spark.barbara@epa.gov](mailto:spark.barbara@epa.gov)) & Shelly Rosenblum ([rosenblum.shelly@epa.gov](mailto:rosenblum.shelly@epa.gov))

**IAQ Tools for Schools National Symposium.** U.S. EPA hosted its 3rd Annual Indoor Air Quality Tools for Schools National Symposium on August 8-10, 2002, in Washington, D.C. The Symposium brought together more than 500 school board officials, administrators, school nurses, teachers, facility managers, school and health association members, parents, and others to discuss good indoor air quality in our nation's schools. There were about twenty attendees from California. Shelly Rosenblum and Bill Jones were speakers. The San Francisco Unified School District IAQ Policy Implementation Committee received a Special Achievement Award. For more information: <http://www.epa.gov/iaq/schools/symposium.html>

**IAQ in Schools.** Region 9 is in the process of finalizing Memoranda of Understanding with two key organizations representing school administrators in California: ACSA (Association of California School Administrators) and CASBO (California Association of School Business Officials). These non-binding memoranda will formalize the existing cooperative partnership with CASBO, and help launch a similar partnership with ACSA. Contact: Barbara Spark

The Association of California School Administrators (ACSA) magazine "Leadership" (Sept.-Oct. 2002) published our article "Lowering Test Scores," an ironic take on how poor IAQ can harm health, performance, and the "bottom line" in schools, and promoting "IAQ Tools for Schools" as a preventive and problem-solving program. ACSA has more than 16,000 members. Click [here](#) to download the article in a .pdf file. Contact the primary author: Shelly Rosenblum.

The article: "Indoor Air Quality in Schools: the Intersection of Health, Test Scores and the Bottom Line" was published in the September issue of the Journal of the Arizona School Boards Association. The article has lots of interesting photographs taken by Shelly Rosenblum during "walk-throughs" of California schools. Click [here](#) to download the article in a .pdf file.

**Asthma/Environment.** Barbara Spark was an observer at the first statewide meeting of the California Endowment-funded "Communities Allied to Fight Asthma" coalitions in July. A number of the coalitions will be addressing IAQ in schools for the first time, and this event provided us with excellent insights into the kind of guidance and outreach resources which we can beneficially provide. Contact: Barbara Spark



Volume 3 of the EPA IED “IAQ Tools for Schools Bulletin” is on asthma and allergy. It includes “Ten Ways to Manage Asthma in Schools.”

[http://www.epa.gov/iaq/schools/images/asthma\\_allergy\\_bulletin.pdf.pdf](http://www.epa.gov/iaq/schools/images/asthma_allergy_bulletin.pdf.pdf)

**New Fact Sheets on Mold.** “A Brief Guide to Mold, Moisture and Your Home” (EPA 402-K-02-003) is now available in printed form from IAQ INFO (800)438-4318. It’s been getting almost 50,000 “hits” per month on our national web site <http://www.epa.gov/iaq> [“Mold Remediation in Schools and Commercial Buildings” continues to receive about 40,000 “hits”/month (not unique users)]. Both documents are available on CD in PageMaker files which can be used by professional print shops for reprinting the document by organizations or companies with the funds to do so. They can add text indicating “courtesy of XXX,” but may not alter the text. For information, contact Barbara Spark.

**New Online.** Visit EPA's new *Healthy School Environments* Web Portal. This brand new site provides one-stop shopping to help facility managers, school administrators, architects, design engineers, school nurses, parents, and teachers find EPA resources for schools. The Web Portal also includes resources developed by other federal agencies, state and local governments, and nongovernmental organizations. Visitors can browse resources by topic, by geographic area, or find specific information by key word search. The *Healthy School Environments* URL is: <http://www.epa.gov/schools>. If you have additional links to recommend, please send them to Bill Jones ([jones.bill@epa.gov](mailto:jones.bill@epa.gov)).

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## FUTURE MEETINGS

Upcoming meetings of the CIWG-IAQ are scheduled as follows:

- December 11, 2002, Department of Health Services, 2151 Berkeley Way, Berkeley
- March 12, 2003, CalEPA Building, 10<sup>th</sup> & I St., Sacramento
- June 11, 2003, Department of Health Services, 2151 Berkeley Way, Berkeley
- September 10, 2003, CalEPA Building, 10<sup>th</sup> & I St., Sacramento

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Attachment A

**East Bay Children's Respiratory Health Study: The First Look**

Janice J. Kim, MD, MPH, Svetlana Smorodinsky, MPH, Bart Ostro, PhD, Michael Lipsett, MD,  
Office of Environmental Health Hazard Assessment, California EPA

East Bay Children's Respiratory Health Study is a cross-sectional epidemiologic study in Northern California evaluating the respiratory health of children and their exposure to traffic-related pollutants. Past studies have demonstrated that children living next to major roads had an increased risk of developing adverse respiratory health symptoms. Because urban air pollution is a significant problem in California, it is important to examine the risks to children who attend schools and reside near major roadways. EBCRHS is the first study of this kind in Northern California.

Using traffic data from the California Department of Transportation and school demographic data from the California Department of Education, we selected ten schools in the San Francisco Bay Area based on their location relative to major freeways and roads. Students attending these schools were predominantly racial/ethnic minorities and were economically disadvantaged. Across the ten schools, the mean proportion of English learners (students with primary language other than English who lack English language skills based on assessment) was 35.3%, with the range of 18.5% to 80.7%. A mean of 27.3% of Spanish language students were not English proficient. A mean of 11.5% of the students at the ten schools were enrolled in CalWorks (aid for families and welfare-to-work program) and 49.6% were enrolled in either the free or reduced cost lunch programs. We invited third, fourth and some fifth grade students to participate in EBCRHS. We obtained information on children's health, family history and home environment via parental self-administered questionnaires. Exposures were assessed through outdoor air monitoring and time-activity questions on the parental questionnaires. The following is the first look at the respondent population.

The overall response rate was 1111 out of 1571 eligible students, or 70.72%. The individual schools' responses ranged from 61% to 83%. The individual classrooms' responses ranged from 42% to 93%. Almost a third of parents/legal guardians filled out the questionnaire in Spanish; 87.4% identified their children as non-White; 31.2% of households were at or below federal poverty level; 10.3% of children were not covered by health insurance; 48.7% of responding parents had high school or less level of education; 7.2% reported having a current regular smoker in the household; 35.7% reported mold/mildew presence within past 12 months; 40.0% reported living within a block of a street with heavy traffic; 16.6% reported heavy truck/bus traffic near child's home; 53.0% of children exercised or played outdoor sports three or more times a week; 14.0% of children had current physician-diagnosed asthma; and 16.7% had symptoms of chronic bronchitis. Preliminary comparison of schools located near major freeways to schools located further away showed no significant difference in the proportion of children with chronic bronchitis symptoms or current asthma.

Further analysis will help shed light on the relationship between children's exposure to traffic-related pollutants at the school site and their respiratory health.



**Traffic-Related Air Pollution and Respiratory Health: The East Bay Children's Respiratory Health Study.**

Janice J. Kim<sup>1</sup>, Svetlana Smorodinsky<sup>1</sup>, Bart Ostro<sup>1</sup>, Michael Lipsett<sup>1</sup>, Brett C. Singer<sup>2</sup>, and Alfred T. Hodgson<sup>2</sup>

<sup>1</sup>Office of Environmental Health Hazard Assessment, California EPA

<sup>2</sup>Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory

Traffic-related emissions are a major source of air pollution in most urban areas. Recent studies, primarily in Europe and Japan, have reported an association between respiratory symptoms and residential proximity to busy roadways. School location near a busy road may be an important surrogate of traffic-related exposures as well. To investigate whether these findings might apply in California, which has stringent motor vehicle emissions regulations, we conducted the East Bay Children's Respiratory Health Study (EBCRHS), a cross-sectional epidemiological study of the respiratory health of children (8-11 years old, n = 1100) attending one of ten schools located at varying distances from major roadways in the San Francisco Bay Area. Ten demographically similar schools were selected based on proximity to major roadways and traffic density of roads. "Near" schools (n=6) had a major road (average annual daily traffic >90,000 cars/day) within 350 m. "Far" schools (n= 4) were located >750 m from all major freeways and had no road with traffic >20,000 cars/day within 300 m. Information on the child's respiratory health, family history, and home environment were obtained by a self-administered parental questionnaire. Outdoor concentrations of traffic-related air pollutants (nitrogen oxides (NO<sub>x</sub>, NO<sub>2</sub>) and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and Black Carbon)) at the schools were measured simultaneously over 1-2 week intervals in two seasons. Study average pollutant concentrations at individual schools ranged as follows: NO<sub>x</sub>, 33-66 ppb; NO<sub>2</sub>, 18-31 ppb; PM<sub>10</sub> mass, 27-32 µg/m<sup>3</sup>; PM<sub>2.5</sub> mass, 12-15 µg/m<sup>3</sup>; and BC associated with PM<sub>10</sub>, 1.7-2.8 µg/m<sup>3</sup>. School location (upwind-near, downwind-near, upwind-far, and downwind-far) and annual estimates of traffic-related air pollutants at the neighborhood school were used as surrogate measures of children's overall exposure to traffic-related pollution. Preliminary results show that parental history of asthma, history of water damage to the house, presence of mold within the previous 12 months and presence of pests within the previous 12 months are associated with bronchitis symptoms. Controlling for several demographic and environmental variables, preliminary results show that the prevalence of bronchitis symptoms is increased in children attending schools near and downwind a major road compared to children attending schools far and upwind from a major road. Similarly, school location was associated with current physician-diagnosed asthma. Of the measured air pollutants, only NO<sub>x</sub> was weakly associated with an increased prevalence of bronchitis symptoms. Further analyses using other traffic metrics will be explored. Preliminary findings of the EBCRHS support the hypothesis that there is an increase in respiratory symptoms among children living and attending schools near busy roads.